

What Is Claimed Is:

1. A process for producing 3-iodo-2-propynyl butylcarbamate which comprises reacting propynyl butylcarbamate with a source of the iodide + ion, wherein the reaction is carried out in an aqueous solution of a nonionic surfactant.
2. The process of claim 1, wherein the iodide + ion is produced by the in-situ oxidation of a iodine salt which is dissolved in water.
3. The process of claim 1, wherein 3-iodo-2-propynyl butylcarbamate is produced by the reaction of propynyl butylcarbamate with an iodide + ion and the reaction is carried out at a pH of greater than 7.
4. The process of claim 3, wherein the iodide salt is a member selected from the group consisting of sodium iodide and potassium iodide.
5. The process of claim 1, wherein the nonionic surfactant is an alcohol ethoxylates.
6. The process of claim 3, wherein the nonionic surfactant is a member selected from the group consisting of alcohol ethoxylates.
7. The process of claim 4, wherein the nonionic surfactant is a member selected from the group consisting of alcohol ethoxylates.

8. A process for the production of IPBC, which comprises the steps of:
- a. charging a reactor with an aqueous solution of a nonionic surfactant,
  - b. cooling the reaction mass to a temperature of less than about 12°C,
  - 5 c. adding to the reaction mass an aqueous solution of a metallic iodide salt,
  - d. adjusting the pH of the reaction mass to greater than 7 with a molar excess of an alkali metal hydroxide, wherein the molar excess is based on the propynyl butylcarbamate to be added,
  - 10 e. charging the reaction mass with an effective amount of propynyl butylcarbamate,
  - f. charging the reaction mass with a solution of an oxidizing agent while maintaining the temperature at less than about 11°C,
  - g. agitating the reaction mass for an effective period of time and,
  - 15 during this period, allowing the temperature of the reaction mass to ramp up to a temperature of about 20°C,
  - h. ramping the temperature of the reaction mass up to a temperature of less than about 40°C,
  - i. adjusting the pH with an organic acid such that the pH of the reaction mass is slightly acidic,
  - 20 j. adjusting the pH to about 6.6,
  - k. ramping the temperature of the reaction mass up to a temperature of less than 59°C ,
  - l. ramping the temperature down to a temperature of about 25 to about 30°C,
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- m. ramping, with agitation, the temperature of the reaction mass down to room temperature,
- n. filtering and washing the reaction mass with water and drying to a constant weight.

9. A process for the production of 3-iodo-2 propynyl butylcarbamate which comprises the steps of:

- a. charging a reaction vessel with an aqueous solution of a nonionic surfactant wherein the concentration of the nonionic surfactant is from about 15 to about 20 weight percent of the below set forth propynyl butylcarbamate charge,
- b. cooling the solution to a temperature of from about 0 to about 8°C,
- c. adding to the reaction mass from about 1.0 to about 1.03 weight percent of an iodide metal salt which is a member selected from the group consisting of sodium iodide and potassium iodide,
- d. adjusting the pH of the reaction mass to greater than 7 with an alkali metal hydroxide and providing an excess of from about 0.8 to about 1.0 moles of alkali based on the n- propynyl butylcarbamate to be added,
- e. while stirring, adding to the reaction mass from about 1 mole weight percent of n- propynyl butylcarbamate while maintaining the temperature of the reaction mass at from about 0 to about 8°C,
- f. while stirring, charging the reaction mass with from about 1.1 to about 1.3 mole percent of sodium hypochlorite, while maintaining the temperature at from about 6 to about 11°C,

- g. allowing the temperature of the reaction mass to ramp up to from about 15 to about 20°C and continue the agitation for a period of time of from about 60 to about 120 minutes,
- h. ramping the temperature up to from about 35 to about 40°C at a rate of from about 0.25 to about 0.75 degrees per minute,
- i. adjusting the pH of the reaction mass to about 6.9 with acetic acid,
- j. adjusting the pH to about 6.6 with sodium bisulfite,
- k. ramping the temperature up to a temperature of from about 55 to about 59°C at a rate of from about 0.25 to about 0.75 degrees per minute,
- l. ramping the temperatures of the reaction mass down to a temperature of from about 25 to about 30°C at a rate of from about 0.35 to about 0.75 degrees per minute,
- m. washing the reaction mass with water, and
- n. drying the reaction mass at a temperature of from about 25 to about 45°C to a constant weight.

10. A process for the production of 3-iodo-2-propynyl butylcarbamate comprising the steps of:

- a. charging a reaction vessel with an aqueous solution of a nonionic surfactant wherein the concentration of the nonionic surfactant is from about 15 to about 20 weight percent of the below set forth propynyl butylcarbamate charge,
- b. cooling the solution to a temperature of from about 0 to about 8°C,

- 10 c. adding to the reaction mass from about 1.0 to about 1.03 weight percent of an iodide metal salt which is a member selected from the group consisting of sodium iodide and potassium iodide,
- d. adjusting the pH of the reaction mass to greater than 7 with an alkali metal hydroxide and providing an excess of from about 0.8 to about 1.0 moles of alkali based on the n-propynyl butylcarbamate to be added,
- 15 e. while stirring, adding to the reaction mass from about 1 mole percent of n-propynyl butylcarbamate while maintaining the temperature from about 6 to about 11°C,
- f. while stirring, charging the reaction mass with from about 1.1 to about 1.3 mole percent of sodium hypochlorite, while maintaining
- 20 the temperature at from about 6 to about 11°C,
- g. allowing the temperature of the reaction mass to ramp up from about 15 to about 20°C and continuing the stirring for a period of time of from about 60 to about 120 minutes,
- h. ramping the temperature up to from about 35 to about 40°C, at a
- 25 rate of from about 0.25 to about 0.75 degrees per minute,
- i. adjusting the pH of the reaction mass to about 6.9 with acetic acid,
- j. adjusting the pH to about 6.6 with sodium bisulfite,
- k. ramping the temperature up to a temperature from about 55 to about 59°C at a rate of from about 0.25 to about 0.75 degrees per
- 30 minute,

- l. ramping the temperatures of the reaction mass down to a temperature from about 25 to about 30°C at a rate of from about 0.35 to about 0.75 degrees per minute,
- m. washing the reaction mass with water, and
- 35 n. drying the reaction mass at a temperature from about 25 to about 45°C to a constant weight.

11. The 3-iodo-2-propynyl butylcarbamate produced by the process of claim 1.

12. The IPBC produced by the process of claim 8.

13. The 3-iodo-2-propynyl butylcarbamate produced by the process of claim 9.

14. The 3-iodo-2-propynyl butylcarbamate produced by the process of claim 10.